

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (currently amended): A decoder for a communication system, the decoder comprising:

a first decoder block that receives a soft-input information bit for decoding and calculates a probability estimate for the soft-input information bit using modulo arithmetic operations;

a second decoder block configured to receive and process the probability estimate of the soft-input information bit using modulo arithmetic operations; ~~and~~

a decision module adapted to receive the processed soft-input information bit and to generate hard-decision output information-; and

whereby said modulo arithmetic operations along with a logarithmic domain obviate a need for additional operations to scale and normalize data.

Claim 2. (currently amended): A ~~The~~ decoder as defined in claim 1, wherein the first decoder block includes an output element configured to receive the soft-input information bit and to generate extrinsic information.

Claim 3. (currently amended): A The decoder as defined in claim 2, further comprising: an interleaver configured to interleave the received output extrinsic information, and to direct the interleaved output to the second decoder block.

Claim 4. (currently amended): A ~~The~~ decoder as defined in claim 3, wherein the second decoder block includes a state metric calculator configured to calculate backward and forward metrics using the soft-input information bit and the extrinsic information.

Claim 5. (currently amended): A ~~The~~ decoder as defined in claim 4, further comprising: a deinterleaver configured to deinterleave output of the second decoder block, and to feed the deinterleaved output back to the first decoder block.

Claims 6-39 (Canceled)